## **Firestone Building Products**

## **Environmental Improvement Project Results**

**Project #1:** Increase the amount of dust brick recycling over 2009 levels.

## **Measurements:**

	(2006)	(2007)	(2008)	(2009)	(2010)	(2011)	(2012)	(2013)	Goal (2014)	Units
Actual Total Nonhazardous Dust Brick Waste Generation	133.8	154.4	152.1	91.9	77.93	94.6	120.5	164.6		Tons
Total Nonhazardous Dust Brick Waste Recycled	0.0	0.0	13%	12%	72%	86%	25%	34%	60% of generati	Tons
			Currer	nt Year	Board F	eet of P	roducti	on = 14	8,769,566	

Dust brick generation is by far the largest nonhazardous waste generation item at this location. Historically dust bricks have been disposed of in a landfill. In order to reduce our environmental footprint it has been desirable to find an alternate use for the dust bricks and reduce or eliminate placing them in a landfill. Results from targeted goal for 2013 to increase recycling/incineration of dust bricks were not completely successful. 110,825 lbs. (55.41 tons) of dust brick waste was recycled during 2013 as compared to 59,852 lbs. (29.9 tons) during 2012. As a percentage 34% of dust bricks generated were recycled during 2013 versus 25% of dust bricks recycled in 2012. Failure to meet goal was primarily due to our recycle partner's continued inability, during much of 2013, to take the volume of dust bricks generated. However, our partner is working to develop additional absorbent material sales streams and has already increased the volume of dust bricks being accepted. We continue to work closely with our partner in effort to increase recycling of dust bricks to 100% of generation, as well as explore other recycle avenues.

Benefit to the environment for the year: Recycling of 55.4 tons of dust bricks that would have otherwise gone into the land-fill. In addition to recycling of dust bricks, this facility recycled 51,669 lbs. (25.8 tons) of office paper, cardboard, plastic, wood pallets, metal, and facer/bag cores. Total recycling for 2013 was 162,494 lbs. (81.2 tons). This compares with 128,328 lbs. (64.2 tons) recycled in 2012. This represents a 26% increase in recycling for 2013, solely due to increased dust brick recycling.

Benefit or savings to the company: The Company's effort toward reduction of our environmental foot-print does result in slight cost savings due to elimination of part of the cost to land-fill a portion of generated dust bricks. Most of the benefit comes purely from the knowledge we are reducing the footprint to our environment and to our children's future. Efforts to increase recycling of waste streams are on-going.

Target Goal for 2014: Increase recycling of dust bricks to 60% of generation.

12/4/2017

**Project #2:** Reduce use of hazardous chemicals used in manufacturing process.

## **Measurements:**

			Year 2 (2007)						Year 8 (2013)	Units	
Actual Quantity (per year)	16,628,688	16,338,285	18,889,161	19,723,203	12,536,632	10,673,007	12,288,036	15,482,064	21,635,665	Lbs	
Normalizing Factor	1.0	1.05	1.15	1.22	0.77	0.64	0.77	0.98	1.33	Lbs	
Normalized Quantity (per year)	16,628,688	15,560,271	16,425,357	16,166,560	16,281,340	16,676,573	15,958,488	15,798,024	16,267,417	Lbs	
Basis for Normalizing Factor	Board Feet of Production Baseline Board Feet of Production = 111,474,310 Current Year Board Feet of Production = 148,769,566										

Activities related to this commitment or, if relevant, any circumstances that delayed progress this year: For 2013 we were not successful in reducing the amount of raw chemicals consumed per unit produced. Production volume increased 36% from 2012 to 2013; however, chemical usage (normalized to 2005) increased by 3.0%. This is a significant increase in raw chemical usage. We are investigating ways to improve production efficiency in order to bring the chemical usage down in 2014.

Benefit to the environment for the year: Reduced chemical usage translates into more efficient conversion to product reducing emissions from the process and minimizing waste generation.

Benefit or savings to the company: Continued cost savings to the company via reduction of chemicals purchased per unit manufactured and overall cost reduction. This reduces the environmental foot-print of our facility through reductions in the use of natural resources required to manufacture chemicals.

Target Goal for 2014: Additional 0.5% reduction in the usage of chemicals per unit manufactured.